

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Sand Hollow Permit
<b>Proposed Implementation Date:</b>	June 2017
<b>Proponent:</b>	Montana DNRC
<b>Location:</b>	11 miles southeast of Deer Lodge, Montana
<b>County:</b>	Deer Lodge

### I. TYPE AND PURPOSE OF ACTION

The Montana Department of Natural Resources and Conservation's Anaconda Unit is proposing a vegetation treatment on approximately 79 acres of Common School Trust land within section 36, T6N, R9W. The proposed project would be designed to provide revenue for the Common School Trust Fund, enhance aspen, remove conifer encroachment into grasslands and improve forest health in mature stands.

The lands involved in this proposed project are held in trust by the State of Montana. (Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X, Section 11). The Board of Land Commissioners and the DNRC are required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for the beneficiary institutions (Section 77-1-202, MCA).

The DNRC would manage lands involved in this project in accordance with:

1. The State Forest Land Management Plan (DNRC 1996),
2. Administrative Rules for Forest Management (ARM 36.11.401 through 471),
3. The Montana DNRC Forested State Trust Lands Habitat Conservation Plan (HCP) (DNRC 2010)
4. All other applicable state and federal laws.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project. List number of individuals contacted, number of responses received, and newspapers in which notices were placed and for how long. Briefly summarize issues received from the public.*

No formal scoping was initiated. Adjacent landowners and DNRC grazing lessee were notified.

#### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

*Examples: cost-share agreement with U.S. Forest Service, 124 Permit, 3A Authorization, Air Quality Major Open Burning Permit.*

- **United States Fish & Wildlife Service-** DNRC is managing the habitats of threatened and endangered species on this project by implementing the Montana DNRC Forested Trust Lands HCP and the associated Incidental Take Permit that was issued by the United States Fish & Wildlife Service (USFWS) in February of 2012 under Section 10 of the Endangered Species Act. The HCP identifies specific conservation strategies for managing the habitats of grizzly bear, Canada lynx, and three fish species: bull trout, westslope cutthroat trout, and Columbia redband trout. This project complies with the HCP. The HCP can be found at [www.dnrc.mt.gov/HCP](http://www.dnrc.mt.gov/HCP).
- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.

- Montana/Idaho**

**Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.

### 3. ALTERNATIVE DEVELOPMENT:

*Describe alternatives considered and, if applicable, provide brief description of how the alternatives were developed. List alternatives that were considered but eliminated from further analysis and why.*

**No-Action Alternative:** No trees would be removed.

**Action Alternative:** Trees would be harvested from approximately 79 acres to enhance aspen clones, remove conifer encroachment and improve timber stand health.

## III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.
- Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.
- Enter "NONE" if no impacts are identified or the resource is not present.

### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify direct, indirect, and cumulative effects to soils.*

Parent materials are residium and alluvium from decomposed granitics and volcanic bedrock. Soils in the harvest units and roads are a complex of Ambrant-Rochester- & Rock Outcrops on mainly 15-35% slopes and some steeper pitches. These soils have very stony sandy loam surfaces over sandy subsoils and are high erosion risk and easily eroded where disturbed. Under HCP implementation rule ARM 36.11.425 an RMZ is of 100 feet required for the Class 2 segment of Sand Hollow Creek. Soils on upland sites have low water holding capacity and are droughty. These are low volume stands with extensive conifer regeneration and low to moderate coarse woody debris on site.

Primary concerns are risk of erosion on disturbed soils. Past impacts of selective tree harvest, mining, ditching and grazing are moderate. The main road is well maintained, a secondary road in the north end of the section has short steep pitches and inadequate drainage.

Soil Disturbance and Productivity	Impact								Can Impact Be Mitigated?	Comment Number
	Direct & In-Direct				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
<b>No-Action</b>										
Physical Disturbance (Compaction and Displacement)			X				X			
Erosion			X				X		On Roads	
Nutrient Cycling	X				X					
Slope Stability	X				X					

Soil Disturbance and Productivity	Impact								Can Impact Be Mitigated?	Comment Number
	Direct & In-Direct				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High		
Soil Productivity	X				X					
Action										
Physical Disturbance (Compaction and Displacement)		X			X				Yes	1
Erosion			X				X			1
Nutrient Cycling		X	X			X			Partially	2
Slope Stability	X				X					
Soil Productivity		X	X			X			Partially	2

**Comments & Mitigations:** There is a low to moderate risk of additional direct, In-direct and cumulative impacts based on implementation of BMPs, Forest Management Rules and mitigation measures to protect soil resources, compared to no-action on this small scale project of less than 80 acres with limited timber volume removal. Aspen regeneration would be promoted on selected sites by slashing and spot burning small debris piles to encourage re-sprouting of aspen clones.

1) Skidding operations are planned to minimize soil impacts consistent with forest management rules, but impacts will depend on administration and the level of actual ground disturbance. Mitigations would include limiting ground based skidding to slopes less than 40%, cable winching from the SMZ/RMZ and seeding of selected areas where more soil disturbance may occur.

Operations within the SMZ/RMZ would be limited to hand felling and winching to minimize disturbance and control erosion. The localized and well-distributed nature of the burn piles would burn off surface vegetation, but is not expected to cause excessive erosion or off-site sedimentation, and should quickly recover and promote aspen, similar to other burn areas surveyed following wildfires.

No new roads are proposed. Roads and skid trails require frequent and closely spaced drainage features to effectively control erosion. The secondary road in the north ½ of the state parcel will require additional drain-dips to control erosion.

2) Logs would be whole tree skidded, yet a portion of woody debris would be retained on site for nutrients/moisture and as spot piles for burning to promote aspen regeneration, while providing hazardous fuel reduction and prompt revegetation as needed to protect soil resources. Thinning slash and old, decayed coarse woody debris that does not pose a fire safety hazard would be retained following harvest for soil productivity/moisture/and conifer microsites.

## 5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify direct, indirect, and cumulative effects to water resources.*

Sand Hollow is a Class 2 stream with perennial flow through the state project parcel that ends below the state boundary and is not connected to the Clark Fork River. The channel banks have fair stability with localized bank downcutting and moderate direct and cumulative sedimentation impacts from past placer mining exploration, ditching, and roads and grazing use. Channel incisement is most apparent below the main road crossing site, and is associated with past placer exploration and grazing impacts. The main road is regularly maintained, yet is a continued source of sediments. Aspen sites have been declining in health with low levels of regeneration of aspen clones, compared to historic distributions. Based on high erosion risk soils on site, a 100 ft. RMZ would be designated parallel to Sand Hollow Creek. The proposed harvest would use existing roads and the main road

is well maintained, while a secondary road in the north end of the section has short steep pitches and inadequate drainage and is eroding, but there is not direct delivery of sediments to surface waters.

Water Quality and Water Quantity	Impact								Can Impact Be Mitigated?	Comment Number
	Direct & Secondary				Cumulative					
	N o	Low	Mod	High	No	Low	Mod	High		
<b>No-Action</b>										
Water Quality			X				X			
Water Quantity		X				X				
<b>Action</b>										
Water Quality			X				X		Y	1
Water Quantity		X				X			Y	1

**Comments & Mitigations:** There is a low to moderate risk of additional direct, In-direct and cumulative impacts based on implementation of BMPs, mitigation measures compared to no-action on this small scale project of less than 80 acres with limited timber volume removal. There is low risk of additional impacts to the SMZ/RMZ based on hand-feeling and winching trees. Aspen regeneration would be promoted on selected sites by slashing and spot burning small debris piles to encourage re-sprouting of aspen clones.

1) The proposed harvest and thinning would remove low volumes of trees/acre and is not expected to have a measurable influence on: water quantity, the amount or timing of runoff (water yield), or downslope stream stability from the proposed project area when compared to the effects anticipated under no action. With both the No-action and Action alternatives there is a moderate impact to water quality from grazing and past mineral exploration. Based on the harvest design, there is a low risk of additive direct, indirect or cumulative effects to water quantity or downstream beneficial uses from the action alternative compared to no action.

Best Management Practices (BMPs), would be applied and administered during harvest operations. Skid trails would be stabilized by slashing or installing drainage where needed to prevent erosion. Areas of higher disturbance would be grass seeded as designated. Planned operations include up to 10.2 acres of selective harvest within the RMZ that is adjacent to a Class 2 intermittent segment of Sand Hollow to promote aspen regeneration. An RMZ would be designated at 100 feet from the Class 2 channel, where ground disturbance would be minimized by hand-felling and winch line skidding and the removal of a few trees from this protected area presents low additive risk of sedimentation or impacts to water quality. Harvest equipment would only operate from existing roads and agreed skid trails. The proposed treatment may include light spot burning of woody debris near aspen root crowns. Burning the low piles of brush may leave disconnected spots of slight to moderate burn intensity that should have a positive vegetative recovery of aspen and no off-site sedimentation is expected.

The proposed haul route would use existing roads. Hauling operations would be limited to dry, frozen or snow covered conditions to prevent rutting disturbance and sedimentation. Road drainage would be improved on a secondary access road with additional drain-dips.

## 6. AIR QUALITY:

*What pollutants or particulate would be produced (i.e. particulate matter from road use or harvesting, slash pile burning, prescribed burning, etc)? Identify the Airshed and Impact Zone (if any) according to the Montana/Idaho Airshed Group. Identify direct, indirect, and cumulative effects to air quality.*

The proposed project is not within a class 1 airshed or impact zone. A minor amount of particulate would be generated under the action alternative. Burning would be completed in accordance to the rules of the Montana Idaho Smoke Management Coordination Group.

---

## 7. VEGETATION COVER, QUANTITY AND QUALITY:

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify direct, indirect, and cumulative effects to vegetation.*

No rare plants or cover types are present. Stand Level Inventory shows the stands do not meet the Department's old growth criteria. The majority of the stands are in the 100-150 year age class with 32 acres in 75-100 years.

**No Action Alternative:** No change over existing conditions would be expected.

**Action Alternative:** The proposed treatment would modify approximately 40 forested acres. Forest patch size would not change but stand densities would be reduced. There are several individual large old trees scattered throughout the proposed treatment area and nearly all of them would be left for wildlife trees and snags. The proposed treatment follows all applicable Administrative Rules of Montana for Forest Management. Several aspen clones are found within the project area. Where aspen is present, conifer encroachment would be removed to promote an increase in aspen. No unacceptable direct, indirect or cumulative impacts would be anticipated.

**Weed Management:** There is a minor amount of Spotted knapweed scattered throughout the tract. All harvest equipment would be washed and inspected prior to any activities. No unacceptable direct, indirect or cumulative impacts would be anticipated under the action alternative.

---

## 8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify direct, indirect, and cumulative effects to fish and wildlife.*

No fisheries have been identified in the project area and there would be no effect to fisheries.

Proposed activities associated with the Deerlodge South Restoration Project were designed to improve natural resource conditions across the broader landscape. These activities could be classified into the following categories: 1. noxious weed control; 2. aspen regeneration/conifer encroachment control; 3. improved grazing management; 4. riparian ecosystem restoration; and 5. erosion and sediment control. Activities are proposed across several ownerships; specifically, I reviewed the proposed activities that could occur on DNRC-managed lands in T6N, R9W, sections 22, 26, 28, 34, and 36 and provide the following analysis for terrestrial wildlife species that could be using these sections.

**No Action Alternative:** No change over existing conditions would be anticipated.

### **Action Alternative:**

Noxious weed management- The proposed weed management through the use of bio-control, chemical applications and controlled grazing would not only control noxious weeds, but should allow native vegetation to increase and/or replace the non-native weed species. Generally, proposed weed management would retain similar structure for wildlife, with an increased component of native vegetation species. This would benefit the complement of native wildlife that commonly use these grassland types of habitats, such as bobolink, Brewer's sparrow, burrowing owl, long-billed curlew, Northern harrier, golden eagles, pronghorn antelope, mule deer, and Preble's shrew. Improvements in big game forage would be anticipated. Generally, returning areas to native vegetation improves grassland habitats and would not be expected to have detrimental effects to terrestrial wildlife.

Aspen regeneration/conifer encroachment-The proposed removal of portions of the Douglas-fir and juniper stands that are encroaching on primarily native grasslands and/or aspen stands would have generally positive results on the suite of terrestrial wildlife species native to the intermountain grassland areas and native aspen habitats, such as elk, Preble's shrew, northern hawk-owl, and red-naped sapsuckers. Proposed improvements in grassland habitats would improve forage values for a variety of big game species. Conversely, the removal of smaller and/or mid-story conifers would reduce structural diversity in the short-term in the area, which could

have negative effects on species using the area that use these attributes, such as northern shrike, flammulated owl, chipping sparrow, white-crowned sparrow, and hiding cover for mule deer and elk. In the longer term, as mature forested stands develop with greater proportions of aspen trees, habitat quality for a variety of species would improve, including pileated woodpeckers, and silver-haired bats. Collectively, the a change in species assemblages from those that rely on denser young stands of conifers to those that use aspen stands and open grasslands would be more representative of pre-settlement conditions and would favor those wildlife species historically in the vicinity.

Improved Grazing Management- Proposed spring development and off—stream watering facilities would benefit riparian health across the parcels, while also better utilizing existing forage resources. The area shows some signs of concentrated use in the riparian areas, which tend to be some of the more diverse habitats in Montana. Riparian habitats tend to be more diverse, dense, and productive than surrounding uplands. Over 50% of the bird species in Montana depend on riparian areas for breeding despite these areas only accounting for 3% of the land area in the state. Similarly, numerous species of mammals, amphibians, and reptiles rely on the diverse riparian areas for some or all of their life requirements. Providing for better cattle distribution across the area would lessen the effects to native wildlife habitats, particularly in diverse riparian areas. Some reductions in currently underutilized vegetation in the uplands would occur, however these areas are generally more widespread on the landscape and are away from the more diverse riparian habitats. Generally, terrestrial wildlife using native grasslands historically found in the Deer Lodge valley would benefit, including ferruginous hawks, golden eagles, loggerhead shrikes, short-eared owls, and dwarf shrews. The net effect would be an improvement in wildlife habitat for species using these riparian areas with little effect on those species relying on the open grassland habitats.

Riparian ecosystem restoration- Proposed riparian fencing, temporary exclosures, spring protection, and Beaver analogs would improve riparian ecosystems and potentially increase the amount of available habitats on the landscape. The diversity of riparian habitats have been discussed, and these potential actions in concert with the improvements in grazing management previously discussed would improve these ecologically diverse areas. Shrub communities would likely improve with the proposed riparian restoration. Improvements in riparian health and function would benefit a host of terrestrial wildlife species that depend on these habitats, including willow-flycatcher, green-tailed towhee, northern leopard frog, and western toad. Increases in hiding cover for several big game species would also likely occur in the longer term.

Erosion and Sediment Control- Proposed erosion and sediment control would benefit overall aquatic health, which in turn benefits those species previously identified that utilize these diverse riparian areas.

In general, proposed activities would improve natural resource conditions across the broader landscape, including several sections of DNRC-managed lands. Some changes in vegetative species composition and available structure would be possible. These changes could lead to slight changes in terrestrial wildlife species composition, but largely in a direction that favors wildlife species that historically were likely found in the vicinity.

---

## **9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify direct, indirect, and cumulative effects to these species and their habitat.*

See wildlife comments above. No threatened, endangered or sensitive species or have been identified within the project area.

Small wetlands are located within the SMZ directly adjacent to the Sand Hollow stream bed and less than 20 feet from the class 2 channel. No ground operations or harvest would occur within 25 feet of the channel and there would be no impacts to the small adjacent wetlands.

No unacceptable impacts are anticipated with either alternative.

---

**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine direct, indirect, and cumulative effects to historical, archaeological or paleontological resources.*

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date. Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or paleontologic resources, proposed timber harvest activities are expected to have *No Effect to Antiquities*. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

---

**11. AESTHETICS:**

*Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify direct, indirect, and cumulative effects to aesthetics.*

The proposed project area is adjacent to a year round open USFS road. The action alternative would change the visuals of the area. The forested stands would be more open with scattered trees left throughout. The impacts would vary by the viewer. Over time, the visuals would soften as red slash material breaks down and grass fills in disturbed areas. No unacceptable impacts are anticipated with the action alternative.

---

**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify direct, indirect, and cumulative effects to environmental resources.*

No unacceptable impacts are anticipated under either alternative.

---

**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

None present.

---

IV. IMPACTS ON THE HUMAN POPULATION
<ul style="list-style-type: none"><li>• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i></li><li>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i></li><li>• <i>Enter "NONE" if no impacts are identified or the resource is not present.</i></li></ul>

---



---

**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

The proposed project is located adjacent to a year round open USFS road. Under the action alternative, safety signs would be required at various locations along the proposed area. No unacceptable impacts are anticipated under either alternative.

---

**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

*Identify how the project would add to or alter these activities.*

No measurable change is anticipated with either alternative.

---

**16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:**

*Estimate the number of jobs the project would create, move or eliminate. Identify direct, indirect, and cumulative effects to the employment market.*

Under the action alternative, one logging company would be employed for approximately 3 months.

---

**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify direct, indirect, and cumulative effects to taxes and revenue.*

No change would be anticipated under either alternative.

---

**18. DEMAND FOR GOVERNMENT SERVICES:**

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify direct, indirect, and cumulative effects of this and other projects on government services*

No change would be anticipated under either alternative.

---

**19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

None

---

**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify direct, indirect, and cumulative effects to recreational and wilderness activities.*

The tract is accessible from a year round open USFS road. Recreational activities could occur year round. However, the majority of recreation is during the general big game hunting season. Under the action alternative, the proposed project would be completed by October 15. No unacceptable impacts are anticipated.

---

**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify direct, indirect, and cumulative effects to population and housing.*

No change would be anticipated under either alternative.

---

**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

No change would be anticipated under either alternative.

---

**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

No change would be anticipated under either alternative.

---

**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify direct, indirect, and cumulative economic and social effects likely to occur as a result of the proposed action.*

The proposed project would generate approximately \$10,000 to the common school trust fund. Future uses such as grazing would still occur.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Brian Robbins	<b>Date:</b> 6/2/2017
	<b>Title:</b> Unit Manager	

---

**V. FINDING**

---

---

**25. ALTERNATIVE SELECTED:**

The action alternative is the selected alternative.

---

**26. SIGNIFICANCE OF POTENTIAL IMPACTS:**

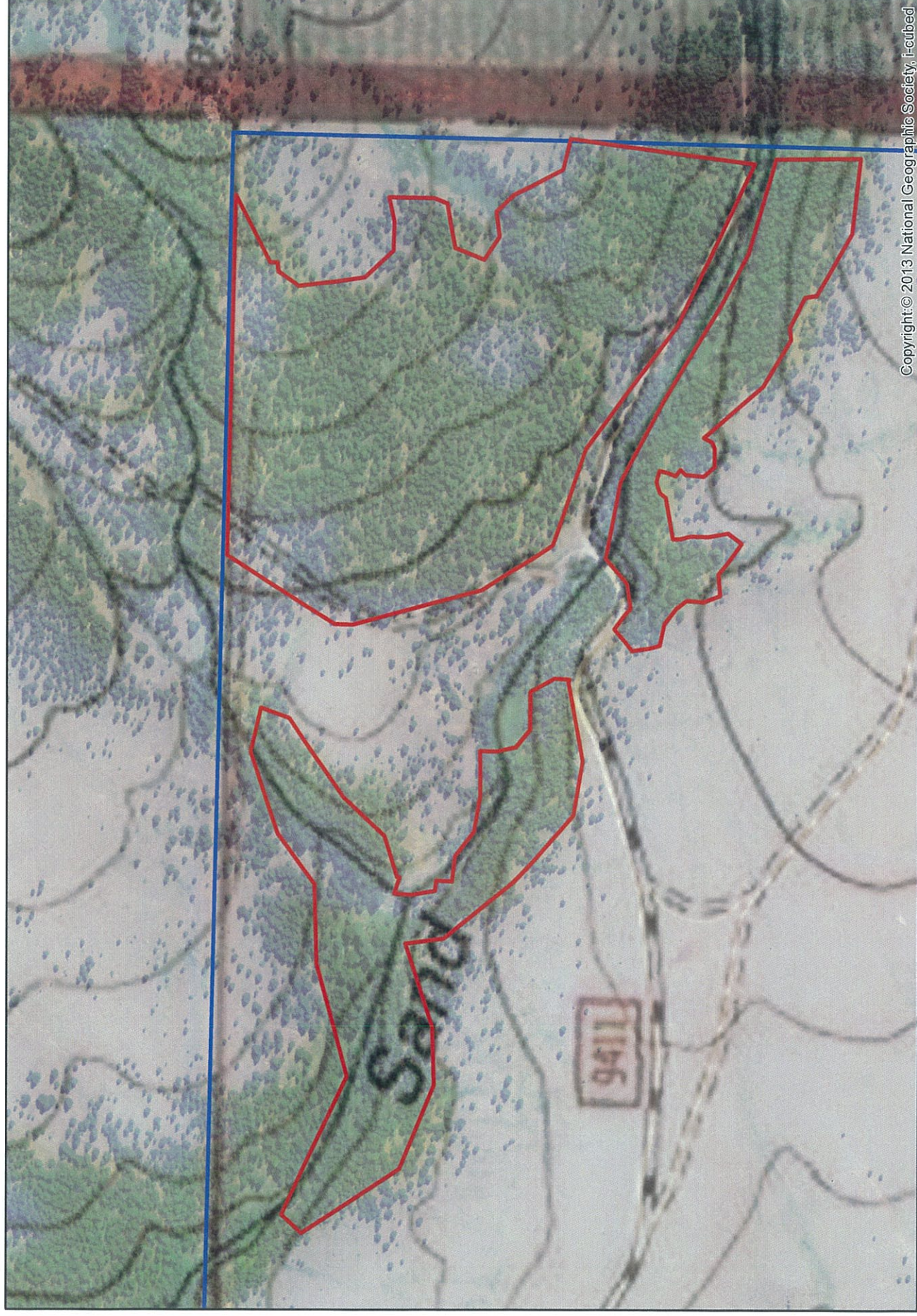
No unacceptable impacts would be anticipated with the action alternative.

---

**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

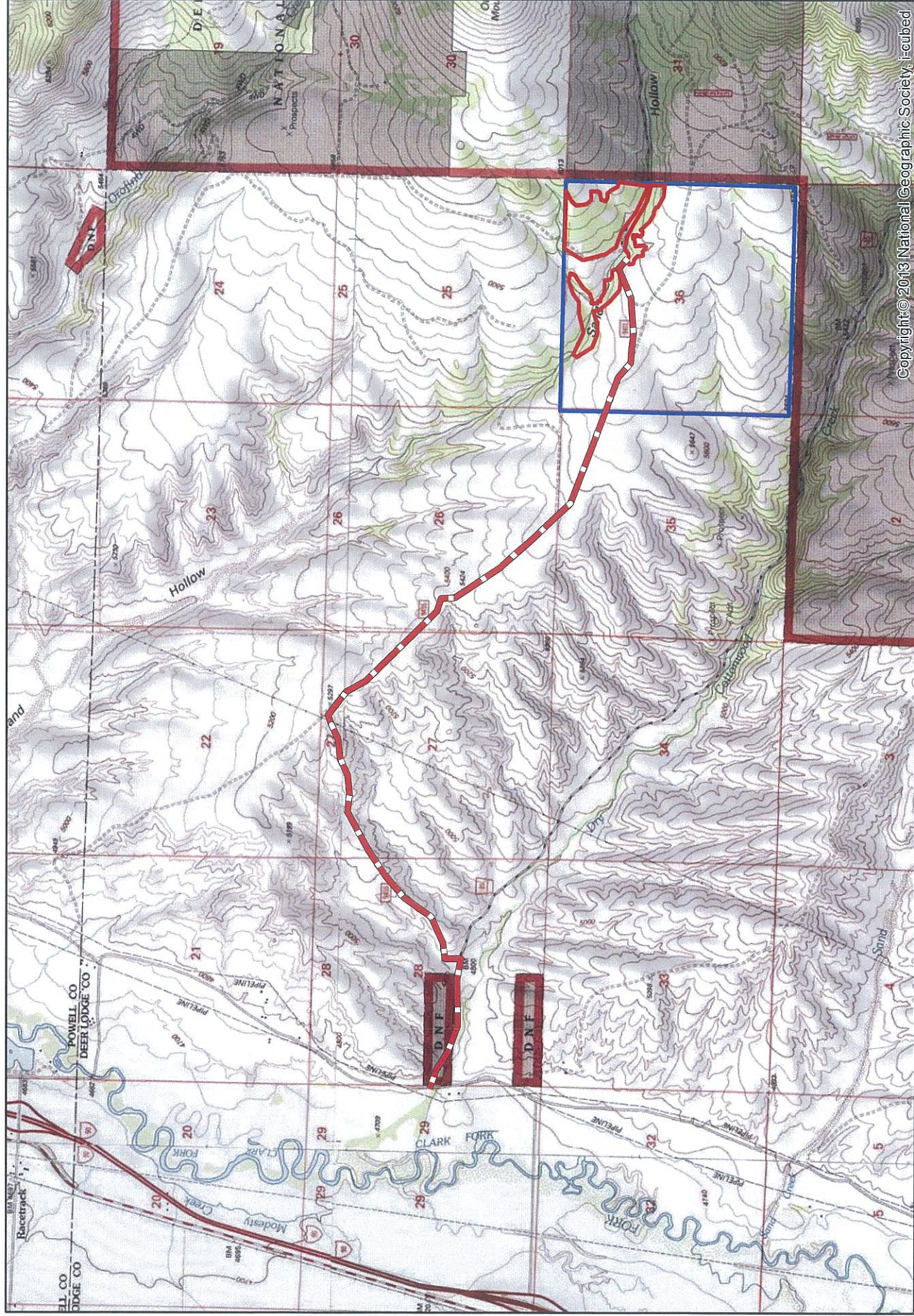
☐ EIS      ☐ More Detailed EA      ☒ No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Sean Steinebach
	<b>Title:</b> Anaconda Unit Service Forester
<b>Signature:</b> 	<b>Date:</b> 6/5/17



Sand Hollow Aspen Restoration TS Haul Route

S36, T6N, R9W, Deer Lodge County



Copyright © 2013 National Geographic Society. All rights reserved.

